



PROVISION AND UTILIZATION OF E-LEARNING FACILITIES FOR EFFECTIVE TEACHING-LEARNING OUTCOME IN UNIVERSITIES IN RIVERS STATE, NIGERIA

Enebeli Belvin

Department of Educational Management
Faculty of Education
University of Port Harcourt
Email address: belvinenebeli@gmail.com

&

Dr. Alete-Omoni, Innocent Mamnenzenu

Department of Educational Management
Faculty of Education
Ignatius Ajuru University of Education
Email address: aleteomoniinnocent@gmail.com

Abstract

This study examined the provision and utilization of e-learning facilities for effective teaching-learning outcome in universities in Rivers State, Nigeria. The study adopted the descriptive research survey design. Three research questions and hypothesis were formulated to guide the study. The population of the study comprised of three thousand one hundred seventy six (3,176) academic staff in the three public universities in Rivers State, Nigeria. A sample size of two hundred and seventy (270) academic staff was selected in the three public universities in Rivers State, Nigeria representing 8.5% of the entire population using proportionate sampling technique. Structured four-point scale questionnaire titled: Provision and Utilization of E-Learning for Effective Teaching-Learning Outcome Questionnaire (PUETFETLOQ) was validated and ensured for data collection. The instrument yielded the reliability index of 0.82. The research questions were answered using mean and standard deviation while the hypothesis was analysed using z-test statistics at 0.05 level of significance. The findings indicated that provision, utilization and possible means of managing e-learning facilities engenders effective teaching-learning outcome in universities in Rivers State, Nigeria. It was recommended among others that government should provide sufficient and quality e-learning facilities to all the universities in Rivers State, Nigeria to ensure effective teaching-learning outcome.

Key words: Provision, utilization and management of e-learning facilities, effective teaching-learning outcome and universities in Rivers State.

Introduction

Teaching and learning are synchronous phenomenon that have a direct and significant confluence to engender an increased educational productivity. It is obvious that in trying to achieve full realization of a viable and scintillating changes in behaviour as a result of learning it is certain that an effective teaching must be carried out. To ensure effective teaching is actualized, teachers must be well trained, certified, have good knowledge of the subject matter and must be willing and able to communicate and transmit instructions effectively and in the most convincing manner to the learner(s) through the use of instructional resources available to the institutions of learning.

Conversely, one of the key goals of every educated and committed teachers is to ensure that wilful learner achieves meaningful and well desired learning experience in an organized educational



setting. This is the reason why teachers are always regarded as managers and engine room in any educational institutions, because if desired learning outcomes are not achieved by the students, it implies that teachers are weak and unproductive. In this regard, it's incontrovertible to say that in order to achieve a better teaching-learning outcome, appropriate and adequate teaching methodology and facilities must be provided for the benefit of the students and teachers' recognition. To ensure full realization of the aforementioned premise, students must be provided with the best possible strategies capable of providing them with integrated and all-encompassing learning environment and technological driven facilities. When learning takes place through electronically delivered means, it is known as e-learning.

In recent time, technology has impacted very significantly on educational industry due to the impact of technology especially Information and Communication Technology (ICT), educational personnel have concluded to utilize the electronically delivered learning (e-learning). As it has been regarded as one of the most significant and efficient educational instructional methods to achieving teaching-learning outcome.

Concept of E-learning

Academic Staff and students in institutions of higher learning in Nigeria as well as the whole world have achieved astronomical transformation especially since the introduction of Information and Communication Technology (ICT). ICT has indeed brought a significant paradigm shift from the traditional method of teaching and learning to the modern method where computer technology is utilized and playing major role. Teachers and students are major human elements in the utilization of computer technology driven devices. It has created significant and pertinent impact in educational institutions and other indispensable sectors existing for man's survival. ICT has created meaningful impacts which cannot be over-emphasized. It has enhanced teaching-learning process and made it more consequential where lectures and students can be in the comfort of their homes or anywhere else and receive lecturers without interfacing with each other. This aspect of teaching and learning benefits the students especially the female students from sexual harassment from the opposite sex. The aspect of ICT that has launched this revolution in teaching-learning process is known as e-learning.

E-learning as encapsulated by Asogwa (2007), is an electronically delivered learning that has become one of the most important and potentially significant and efficient instructional methods to improve teaching and learning. Mgbere (2016) opined that e-learning boils down to learning that is facilitated and supported via Information and Communication Technology (ICT). Body (2005) also put forward that e-learning method is education offered using electronic delivery method such as CD-ROM, video conferencing, websites and e-mail. E-learning makes use of wide range of applications, processes and procedures like web-based learning, computer-based learning, visual learning room and digital collaboration. It encompasses lesson delivery through internet sources, intranet, audio-visual, satellite, interactive TV and CD-ROM.

E-learning as explained by open learning centre in Uwaneze (2011) is an educational resource that helps in effective teaching and learning process created through combining e-digital content with local community and tutor support, along with global community engagement. Markus (2008) defined e-learning as a learning process created by interaction with digitally delivered content, network-based services and tutoring support. It is a traditionally based learning shift to electronically based learning to ascertain teaching objectives. This modern means teaching and learning has catalysed educational system in the society. It also dispelled enormous murky learning processes in educational institutions. E-learning cannot be achieved in a vacuum without its facilities.

E-learning facilities are vital and wealthy to any institutions of higher learning in a given society. These facilities often help in effective teaching and learning process to actualize avowed objectives. Educational objectives are vast which traditional setting may not achieve in the nearest future but with the help of e-learning technologies all round success have been achieved relatively in the education



sector to the point that ICT has created jobs for young graduates. So many graduates are not seeking for white colour jobs anymore in the sense that computer repairing, application and appreciation, training and marketing has engaged them and has been a source of livelihood. E-learning facilities or devices often use this purpose according to Uwaneze (2011), includes laptops or personal computers, CD-ROMS, Television, Personal Digital Assistant (PDA), MP3 players, and mobile phones. Mgbere (2016), also outlined types of e-learning facilities to include laptops/computers, teleconferencing, electronic white board, the e-mail, CD-ROM and visual classroom. It is obvious that these facilities offer students great and viable control over lesson content, learning in sequential order, time management, attention and serious mindedness in assimilation, pace of learning, media competence, helping them to achieving tremendous knowledge and experiences to solving societal problems.

That was why it is stated that Communication Technologies enables the use of internet, e-mail, discussion forms, collaborative software, classroom management software, term learning systems, intranet, extranet, Local Area Network (LAN). Wide Area Network (WAN) audio and video tapes, satellite down links, computerized diagnosed assessment, competency certification and electronic portfolios (Asogwa in Uwaneze, 2011). ICT has enhanced quality learning and made it more efficient. That is to emphasize that E-learning is facilitated and aid through the effective provision and utilization of ICT and computer –based driven technologies. Every institution of higher learning in this great society, especially universities in Rivers State, need sufficient power supply, magnificent hall as classroom space and ICT centres, reading desk, chairs and other supportive appliances and equipment to aid the use of E-learning. The success and failure of E-learning as an organized and prescribed medium of teaching-learning are vested in the provision and utilization of all these facilities. So, to say, the effectiveness of E-learning techniques depends on the amount of E-learning facilities provision and effective utilization of the devices/facilities available in the Universities.

Provision of E-learning facilities determines the success and effectiveness in teaching-learning process as well as the outcome in any learning environment where the use of modern technologies are approved. Provision, utilization and appropriate management techniques are very vital to sustain E-learning method of teaching and learning in the universities. That was why Amini-Philip (2013), averred that provision and effective utilization of instructional resources are germane to classroom communication process. She went further to state that, classroom resources are essential to effective attainment of instructional objectives. Schools, especially the universities ought to have been provided with enormous E-learning facilities to aid the process of modern teaching and learning.

A visit to many university's ICT centres, modern classrooms and lecturers' offices show that E-learning facilities are inadequate or sometimes not available for use. If government, companies, individual donors, university's management, lecturers, parents and students should provide adequate E-learning facilities to the users and selves, which will as well facilitate teaching and learning. Provision of E-learning facilities facilitate and support school personnel to access international curriculum. It enables lecturers and students to meet up with foreign standards. It stimulates the morale of the lecturers to teach effectively with stress free. It arouses student's interest to study harder. It enables students to compete globally. Ase (2012), opined that provision of E-learning facilities in a specialized university brings about greater enthusiasm and high-level happiness to both the staff and students as well as enhancing knowledge. E-learning facilities must be adequately provided for E-learning activities to be effective in the universities.

Utilization of E-learning facilities is very important to the providers of e-learning facilities as well as the users; lecturers and students in the universities. If educational resources such as e-learning facilities are provided, it is required that it should be utilized appropriately. Over-utilization and under-utilization of facilities brings about failure in achieving stated objectives. Uwaneze (2011), opined that utilization of educational resources (e-learning) refers to and connotes the equitable use of resources accountable to the education industry. Effective and equitable utilization of any educational resources is fundamental in meeting avowed needs of the educational industry. This premise is in consonant with



the assertion of Amini Philips (2013), that the provision and effective utilization of instructional resources are germane to classroom communication process. Utilization of e-learning facilities offer learners control over lesson content. It also brings about learning sequence and enables learners to be competent in ICT. That was the reason why Mgbere (2016), opined that e-learning basically boils down to learning that is facilitated and supported via Information and Communication Technology (ICT). Horton (2005) also emphasized that e-learning is the use of internet and digital technologies to create experience that educate our fellow human beings. It implies that e-learning has changed and ameliorated the ways we teach and learn in order to achieve best results. It is imperative to utilize e-learning facilities for better educational achievement. Aterah (2009), pointed out that resources' utilization has a greater and sufficient ways to creating experiences to meet personal and societal learning objectives. Utilization of e-learning brings about pace of learning cannot be utilized without the provision, and can not be properly utilized without appropriate techniques in managing them.

Management of e-learning facilities is something that cannot be undermined and over looked in educational sector. It is very essential to the success of the educational set goals. The application of proper management techniques would go a long way in assisting and putting all provided e-learning facilities into a good state in order to achieve set goals. The actualization of the goals and objectives of education requires the provision, maximum utilization and appropriate management of facilities Mgbere, (2016). It is imperative and pertinent to utilize any educational facilities provided as well as providing best techniques of managing them for effective teaching and learning process and outcome.

Worthy of note is the fact that for e-learning facilities to be in a functional stage, it shouldn't be over used and under used by its users. It should be handled by experts to ensure its life span. Operating it with carefulness is an essential technique of managing e-learning facilities. Effective use of them creates enthusiastic spirit among students and staff. It is also inevitable that facilities with the use of machine must develop mechanical and electrical faults which must be handled by professionals to ensure good maintenance. Therefore, periodical maintenance is appropriate to uninterrupted teaching and learning outcome in the universities. Kpee (2013), opined that management of school facilities is involved in monitoring school facilities from its provision to its use and continuously seek for the availability of school facilities management call for an updated record of existing facilities in the school, their location and purpose and who is currently in custody and making of the facility. It also provides an inventory for movement of each (Kpee, 2013). So, it is pertinent to note that management of school facilities such as e-learning facilities is an all-embracing task. Ase (2012), also opined that E-learning facilities provision and maintenance brings about quality service delivery in Nigerian universities. E-learning facilities need to be provided in schools for effective utilization and with appropriate management techniques to ensure its success and long-life span. In the light of the above overview the researchers investigated the provision and utilization of E-learning facilities for effective teaching-learning outcome in universities in Rivers State, Nigeria.

Statement of the Problem

The introduction of e-learning in Nigerian universities was a decision to bring about all round success in academics, socio-economic and political phenomenon. It supposed to create viable and lucid awareness among lecturers and students to access international standard and curriculum. It was meant to provide an avenue for global competitiveness among students. But its introduction has recorded enormous failure rate among students. It's becoming an alarming issue due to the fact that a computer system is being used by many students, network is not strong, available and free to receive lessons from the lecturers. Schools do not have sufficient and adequate ICT facilities: buildings, equipment and more so, management techniques to ensure their long-life span is lacking. Though, scholars in the past must have examined the provision and utilization of e-learning facilities but we want to examine how the provision, utilization and management of e-learning facilities can engender effective teaching-learning outcome in universities in Rivers State, Nigeria.



Aim and Objectives of the Study

The aim of this study was to ascertain how the provision and utilization of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria. Specifically, the study seeks to:

1. ascertain the ways provision of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria.
2. determine the ways utilization of e-learning facilities brings about effective teaching-learning outcome in public universities in Rivers State, Nigeria.
3. examine the possible means of managing e-learning facilities for effective teaching-learning outcome in public universities in Rivers State, Nigeria.

Research Questions

The following research questions were formulated to guide the study.

1. What are the ways provision of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria?
2. What are the ways utilization of e-learning facilities brings about effective teaching-learning outcome in public universities in Rivers State, Nigeria?
3. What are the possible means of managing e-learning facilities for effective teaching-learning outcome in public universities in Rivers State, Nigeria?

Hypothesis

The hypothesis was tested in the study at 0.05 level of significance.

1. There is no significant different between the mean response of male and female academic staff opinion on the ways provision of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria.

Methodology

This study adopted a descriptive survey research design. The population of the study comprised of three thousand one hundred and seventy six (3,176) academic staff in three public universities in Rivers State, Nigeria. A sample size of two hundred and seventy (270) academic staff was selected in the three public universities in Rivers State representing 8.5% of the entire population using proportionate sampling technique, out of which 143 are male and 127 are female. Two hundred and seventy copies of the questionnaires were sent out to the respondents, out of which 259 copies were completed and retrieved for data analysis. Instrument titled Provision and Utilization of E-learning for Effective Teaching-Learning Outcome Questionnaires (PUELFETLOQ”) was validated by two experts in the Department of Educational Psychology (Measurement and Evaluation). The instrument yielded the reliability index of 0.82 using Crobach Alpha. Section A contains Bio data while B contains questions that elicited information on provision and utilization of e-learning facilities for effective teaching-learning outcome. The instrument was patterned according to modified Likert four-point scale type of Strongly Agreed, Agreed, Disagreed and Strongly Disagreed which are 4,3,2, and 1 points respectively. The instruments were administered by the researchers and three research assistants. The research questions were answered using mean and standard deviation while z-test was used to analyse the hypotheses at 0.05 level of significance.

Results

Research Question One: What are the ways provision of e-learning facilities can engender teaching-learning outcome in universities in Rivers State, Nigeria?



Table 1: Mean and standard deviation response of academic staff on the ways provision of e-learning facilities bring about effective teaching-learning outcome.

S/N	Items	Male Mean	SD	Decision	Female Mean	SD	Decision
1	Provision of e-learning facilities facilitates the accessing of international curriculum.	3.16	.76	Agreed	3.08	.72	Agreed
2	It enables lecturers to meet up with foreign standard.	2.96	.68	Agreed	2.80	.60	Agreed
3	It stimulates the morale of lecturers to teach effectively with stress free.	3.40	.86	Agreed	3.28	.82	Agreed
4	It arouses students' interest to study harder.	2.98	.78	Agreed	3.04	.74	Agreed
5	It enables the students to compete globally.	3.26	.79	Agreed	3.18	.77	Agreed
Grand Total		15.76	3.87		15.38	3.65	
	Grand Mean	1.152	.774	Agreed	3.076	.730	Agreed

Table 1 revealed that all items (1-5) had mean scores above the criterion mean of 2.50. In summary, with the grand mean of 3.152 and 3.076 for male and female academic staff in the universities in Rivers State agreed that the above items are the ways provision of e-learning facilities engender effective teaching-learning outcome in universities in Rivers State, Nigeria.

Research Question Two: What are the ways utilization of e-learning brings about effective teaching-learning outcome in universities in Rivers State, Nigeria?

Table 2: Mean and standard deviation response of academic staff opinion on the ways utilization of e-learning facilities brings about effective teaching-learning outcome.

S/N	Items	Male Mean	SD	Decision	Female Mean	SD	Decision
6	Utilization of e-learning facilities offer learners control over lesson content.	3.19	.82	Agreed	3.14	.80	Agreed
7	It brings about learning sequence.	3.04	.78	Agreed	3.02	.76	Agreed
8	It enables learners to be competent in ICT.	3.68	.98	Agreed	3.60	.86	Agreed
9	It brings about pace of learning.	3.46	.83	Agreed	3.42	.80	Agreed
10	It creates experiences in meeting personal and societal learning objectives.	3.80	.96	Agreed	3.74	.902	Agreed
Grand Total		17.19	4.27		16.92	4.122	
	Grand Mean	3.438	.854	Agreed	3.384	.824	Agreed

Table 2 revealed that items (6-10) had mean scores above the criterion mean of 2.50. In summary with the grand mean of 3.438 and 3.384 for male and female academic staff in the universities in Rivers State, Nigeria respectively, It is adjudged that all of them agreed that the above items are the ways utilization of e-learning can bring about effective teaching-learning outcome in universities in Rivers State, Nigeria.

Research Question Three: What are the possible means of managing e-learning facilities for effective teaching-learning outcome in universities in Rivers State, Nigeria?

Table 3: Mean and standard deviation response on research question three.



S/N	Items	Male Mean	SD	Decision	Female Mean	SD	Decision
11	E-learning facilities should not be over utilized.	3.8	.842	Agreed	3.84	.83	Agreed
12	It should be handled with care.	3.72	.804	Agreed	3.68	.79	Agreed
13	It should be handled by experts only	3.68	.88	Agreed	3.64	.852	Agreed
14	There should be periodic maintenance of the facilities	3.82	.101	Agreed	3.80	.98	Agreed
15	There should be adequate monitoring of the facilities and its accessories.	3.84	.104	Agreed	3.78	.102	Agreed
Grand Total		18.86	2.731		18.74	3.554	
Grand Mean		3.772	.5462	Agreed	3.748	.7108	Agreed

Table 3 showed that all items (11-15) had mean scores above the criterion mean of 2.50. In summary with the grand mean of 3.772 and 3.748 for male and female academic staff in the universities in Rivers State, Nigeria respectively, it is adjudged that the above items have been agreed by all of them as the possible means of managing e-learning facilities for effective teaching-learning outcome in universities in Rivers State, Nigeria.

Test of Hypothesis

Hypothesis One: There is no significant difference between the mean response of male and female academic staff opinion on the ways provision of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria.

Table 4: z-test statistics of the mean responses of male and female academic staff on provision of e-learning facilities

Academic staff	N	df	Mean	SD	P-value	Z-cal	Z-crit	Decision
Male	132	257	3.152	.774	5>0.05	0.813	1.96	Ho Retained
Female	127		3.076	.730				

Data on table 4 revealed that the z-test analysis of difference between the mean scores of the male and female academic staff in universities in Rivers State, Nigeria on the ways provision of e-learning facilities can engender effective teaching-learning outcome in universities in Rivers State, Nigeria. The result showed that z-calculated value of 0.813 is less than the z-critical value of 1.96 at degree of freedom of 257 and at 0.05 level of significance. Hence, the null hypothesis is retained. Therefore, there is no significant difference between the mean response of male and female academic staff on the ways provision of e-learning facilities can engender effective teaching-learning outcome in universities in Rivers State, Nigeria.

Discussion of Finding

The first finding of this study revealed that there is no significant difference between the opinion of male and female academic staff in universities in Rivers State, Nigeria, on the ways provision of e-learning facilities can engender effective teaching-learning outcome in public universities in Rivers State, Nigeria. This finding is in agreement with the assertion of Ase (2012), who opined that the provision of e-learning facilities in a specialized university brings about greater enthusiasm and high-level happiness to both the staff and students as well as enhancing knowledge.



The second finding of this study revealed that with the grand mean of 3.438 for male response and 3.384 for female response, it was agreed that effective utilization of e-learning facilities offer learners control over lesson content. It brings about learning sequence, it enables learners to be competent in ICT; it brings about pace of learning and creates experiences in meeting personal and societal learning objectives.

The third finding revealed that with a grand mean of 3.772 for male academic staff and 3.748 for female academic staff in the universities in Rivers State, Nigeria which are above the criterion mean of 2.50, it implies that all the academic staff have agreed that the possible means of managing e-learning facilities is that; e-learning facilities should not be over utilized, i.e. it should be used optimally, it should be handled with care, it should be handled by experts only, there should be periodic maintenance of the facilities and there should be adequate monitoring of the facilities and its accessories.

Conclusion

Based on the findings of this study, it was concluded that e-learning is an important aspect of formal education offered through the use of electronic devices. It is a 21-century education offered using electronic delivery methods such as video conferencing. The importance cannot be overlooked and underestimated, therefore, universities in Rivers State should be provided with sufficient and adequate e-learning facilities in order to be utilized using the best possible means of managing them for effective teaching-learning outcome in universities in Rivers State, Nigeria.

Recommendations

Based on the findings and conclusion, the following recommendations were given below.

1. Government should provide sufficient and quality e-learning facilities to all the universities in Rivers State, Nigeria to ensure effective teaching-learning outcome.
2. Companies operating in the state should assist the state government in the supply of the facilities to various universities to ensure competence among the students.
3. The school management staff should ensure that academic staff and students utilize e-learning facilities appropriately to achieve set objectives.
4. All educational stake-holders should make sure that possible means of managing e-learning facilities are followed to ensure long life span of the facilities for effective operation and achievement of goals.

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